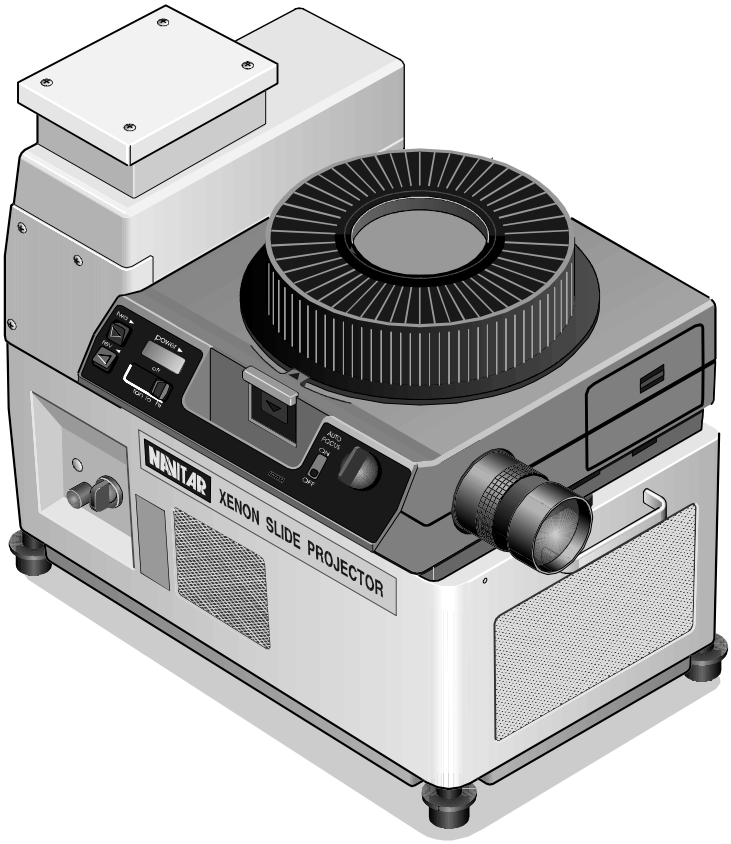
Navitar Xenon 560/750
High Intensity Slide Projector



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Warning **Δ**

IMPORTANT: BEFORE OPENING THE BOX CONTAINING THE XENON BULB, NOTE THE FOLLOWING PRECAUTIONS: The Xenon bulb contains gas under pressure. ***Care should be taken in handling the bulb to avoid injury.***

Wear protective clothing such as gloves, long-sleeved shirt, face and eye covering to protect against flying glass in the event of bulb breakage.

Handle the bulb only by the ends. Natural skin oils from hands may damage the quartz envelope.

Always allow the bulb to cool before handling.

When necessary, clean the bulb with ordinary rubbing alcohol (only when the bulb is cool).

Place the bulb on a soft, secure surface away from table edges.

Never operate the bulb with the lamp cover off. Do not permit light from the bulb to fall directly on skin or clothing. The Light from the Xenon bulb is rich in ultraviolet rays similar to direct sun rays. This could burn the skin and bleach clothing. Do not look at the bulb directly while it is on. The light emerging from the projector lens is safe as long as ***common sense is exercised.***

If you have any questions regarding the installation of the Xenon lamp, please call Navitar at 1-800-828-6778.

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Warning **Δ**

Xenon Lamp Contains Gas Under Pressure.
Read Instructions Carefully Prior to Operating or Moving.

The Xenon bulb contains pressurized gas.

Protective clothing and safety glasses should be worn at all times.

Avoid direct exposure or viewing of an energized bulb in order to prevent ultraviolet damage.

Allow bulb to fully cool before handling. Handle bulb only by the ends.

To clean a bulb, use ***only*** rubbing alcohol, ***only*** when the bulb is fully cooled.

When disposing of the bulb, handle it with care to prevent injury.

If you have any questions, please call Navitar at 1-800-828-6778.

Xenon High Intensity Slide Projectors

The Navitar Xenon Slide Projector is so bright you can make slide presentations with the room lights on. Even more important, you won't loose your audience in the depths of a darkened room. You'll be able to maintain eye contact and see their reactions. And, the audience will be able to see the most important part of the presentation, the presenter.

The brilliance of the Navitar Xenon Slide Projector brings your slides to life with new vividness and clarity. It delivers far more presentation impact than conventional slide projectors because it's six times brighter. Whites are brighter and blacks are blacker. Colors are more vivid and visuals are stronger. Your slides will come alive on the screen.

Navitar's Xenon 560AF and 750AF series slide projectors operate much like a standard slide projector. Just turn it on and the Xenon bulb will strike instantly. It has remote forward/reverse, remote focus, auto focus and a variable timer. This unit can be operated by a Navitar remote control or tied into a boardroom conference system.

The Random Access series – Xenon models 560RAK, 560RARS-232, 750RAK and 750 RARS-232 – allow you to randomly access any slide in the tray in any sequence required, as well as pre-program the slide sequence from a control system.

Xenon models 560DM and 750DM come equipped with Dissolve Modules and are ideal for multi-projector presentations. One Navitar Dissolve Interface unit is required for every three 560DM/750DM projectors. One dissolve controller, like those manufactured by Dataton, AVL, etc., is also required to operate your system.

Supplied Components

Xenon 560/750 projectors come equipped with the following:

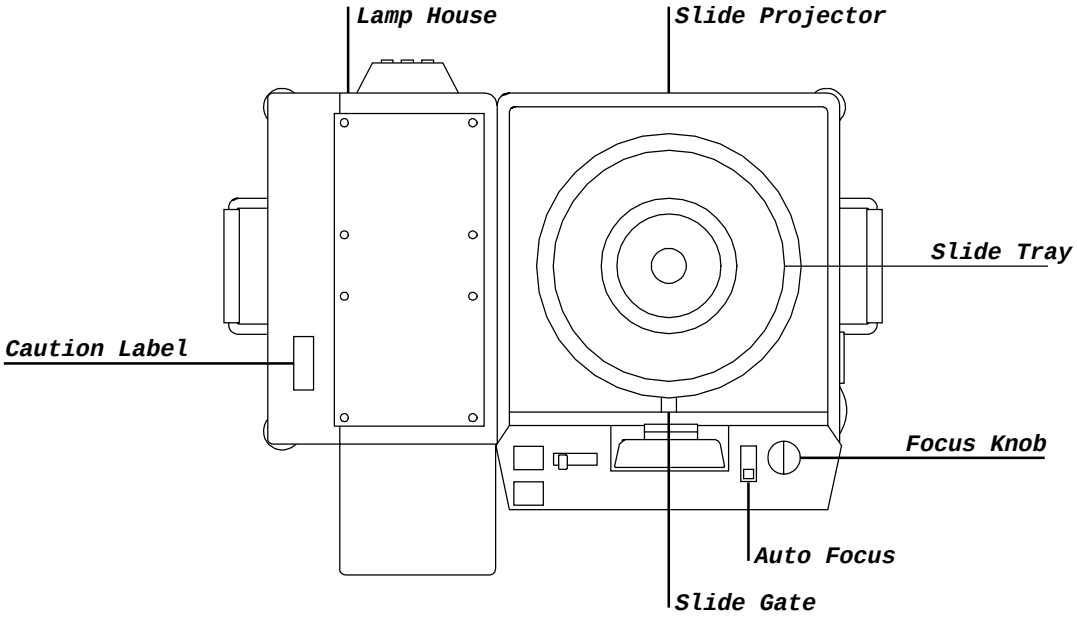
- Projector
- Power Cord
- Xenon Bulb
- Tools: Large & Small Phillips Screwdrivers
- Remote Control
- Instruction Manual

Servicing & Repair

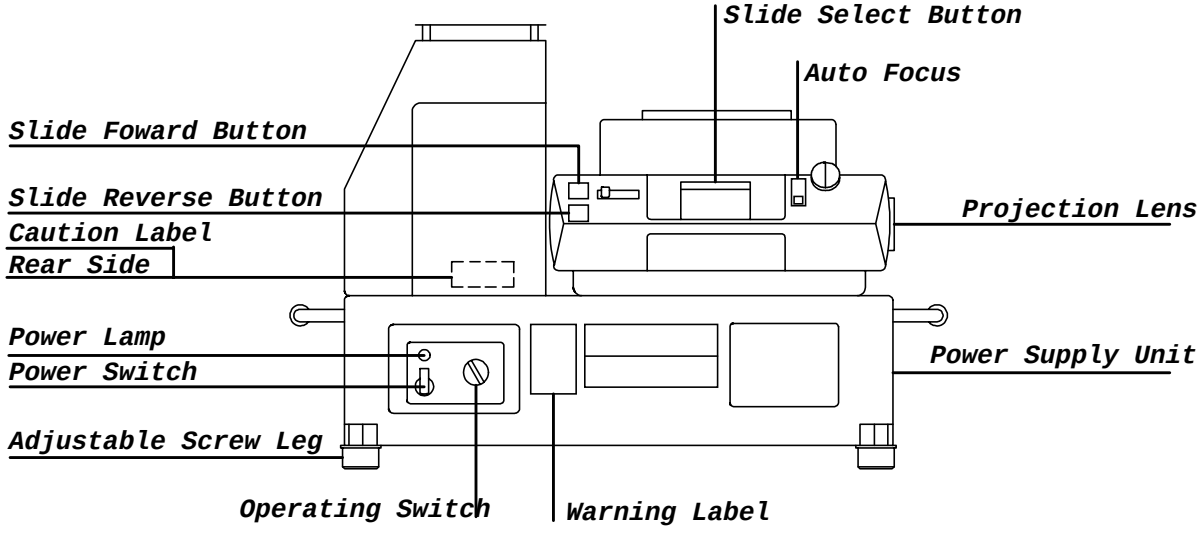
Your new Navitar Xenon Slide Projector is constructed of the finest electronic components available and was designed for maximum reliability. For servicing, contact the dealer that you purchased the projector from or call Navitar at 1-800-828-6778.

If you wish to repair the projector yourself, the information enclosed will allow you to troubleshoot and isolate your problem.

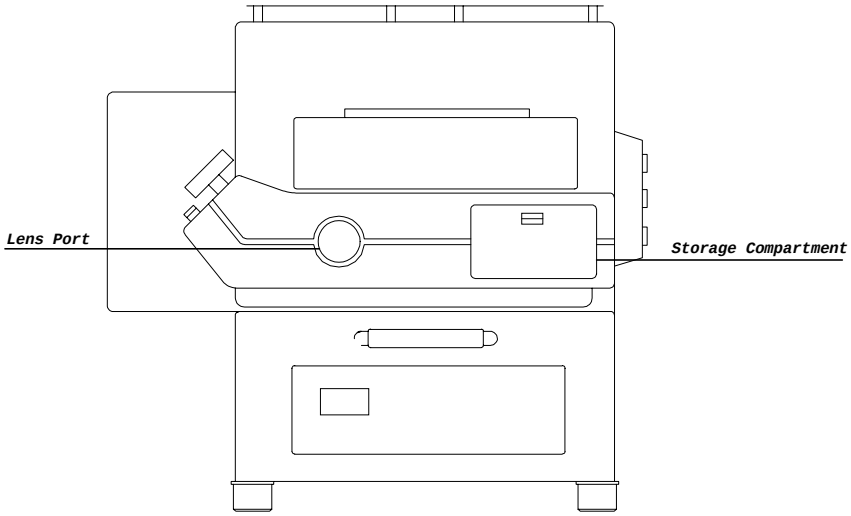
Top View



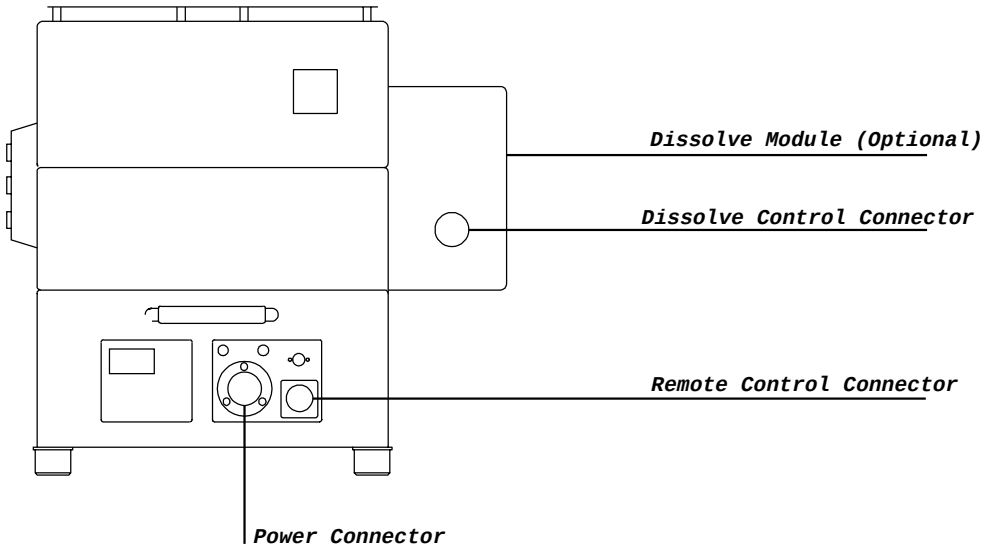
Side View



Front View



Rear View



Slide Projector
Models 560AF/DM and 750AF/DM use a Kodak Ektagraphic-III AMT modified for our Xenon light source.
Models 560RAK/RARS-232 and 750 RAK/RARS-232 use a Navitar ColorPro modified for our Xenon light source.

Slide Tray
80 slide trays are recommended.

Lamp House
Contains a Xenon lamp, a reflector and a mirror.

Slide Forward Button
Advances the slide tray.

Slide Reverse Button
Moves the tray backward.

Power Supply Unit
The power unit for lighting the Xenon lamp. It contains electronics and cooling fans.

Slide Select Lever
By pressing the lever, you can freely rotate the slide tray.

Focus Knob
Turn the knob to manually focus the lens.

Dissolve Module
(Standard on 560DM/750DM projectors.)
Contains a shutter, cam and d.c. servo motor.

Dissolve Control Connector
Connects the cable from the Navitar Dissolve Interface unit to the 560DM/750DM projector.

Operating Switch
The on/off switch to control the fan and the Xenon lamp.

Pilot Lamp
This lamp will light when power is applied.

Power Switch
Power is controlled by this switch after the power cable is connected.

Remote Control Connector
Located on the power supply side, it connects the optional remote connector to operate the fan and lamp by a remote control system.

Forward/Reverse Transfer Switch
Located on the rear part of the projector, it moves the slide tray forward and reverse.

Power Connector
Connects the main power cable.

Zero-point Indicator
When lit, it indicates that the slide tray is at the zero-position.

Adjustable Screw Legs
The projected image can be positioned on screen by adjusting the four legs on the projector base. (Legs should be adjusted as far in as possible when shipping to avoid damage.)

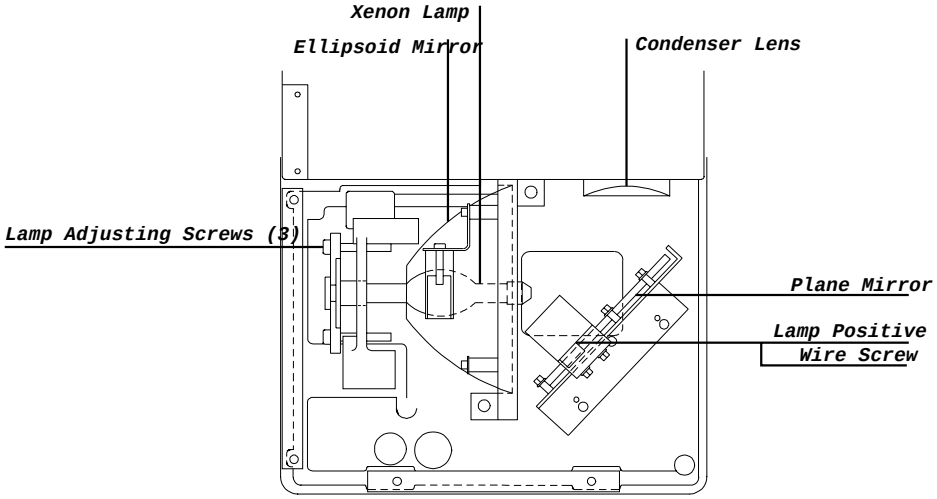
Slide Gate
Loads each slide into the projector from the slide tray.

Projection Lens
A wide variety of Navitar slide projection lenses are available for use with your Xenon projector. A large diameter lens, such as those offered by Navitar, will allow you to output more light from the Xenon projector's lamp house. Conversely, using a low cost, plastic slide lens of a smaller optical diameter may prevent you from achieving maximum brightness on-screen.

Auto Focus Switch
Turns the automatic focusing of slides on/off.

Warning **Δ**

Read these instructions carefully before you remove the projector and other components from the container.



Getting Started

1. Remove contents from shipping container and check against the following list:
   - Projector
   - Power Cord
   - Xenon Bulb (DO NOT REMOVE THE BULB FROM THE BOX UNTIL DIRECTED TO DO SO)
   - Tools – large and small Phillips screwdrivers

2. ***Place the projector on a flat***, ***stable surface*** and adjust leveling feet by turning. This revents the projector from rocking. Make sure the projector is turned off and unplugged from the wall socket.

3. Remove the four (4) white thumbscrews attaching the lamp house top cover. (Do not remove the small covering plate on the lamp house cover if it is installed.)

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Handle the bulb only by the ends. Natural skin oils from hands may damage the quartz envelope.

Always allow the bulb to cool before handling.

When necessary, clean the bulb with ordinary rubbing alcohol (only when the bulb is cool).

Place the bulb on a soft, secure surface away from table edges.

Never operate the bulb with the lamp cover off. Do not permit light from the bulb to fall directly on skin or clothing. The Light from the Xenon bulb is rich in ultraviolet rays similar to direct sun rays. This could burn the skin and bleach clothing. Do not look at the bulb directly while it is on. The light emerging from the projector lens is safe as long as ***common sense is exercised.***

If you have any questions regarding the installation of the Xenon lamp, please call Navitar at 1-800-828-6778.

4. Gently lift off the lamp house top cover. Unhook the white connector and place the cover on the table, out of your way.

5. If you are replacing your lamp (if not, Skip to 36), remove the screw which attaches the positive terminal of lamp. This is the black assembly above the mirror labeled LAMP. Loosen and remove the lens cap which attaches the negative terminal of the lamp to the mirror holder. Take out the old lamp while holding the end cap.

6. Your Navitar Xenon 560 or 750 watt slide projector has been pre-aligned at the factory to be compatible with the enclosed bulb. For optimum illumination and ease of installation, please install as follows. If you look at the Xenon bulb itself, you will see that there is a pointed section of the bulb near the center of the quartz envelope. Please be careful to install the bulb so that this point is facing upwards at 12 o'clock. If the point is placed at any other spot, it will take you longer to properly align your bulb. Remove the bulb from the box by firmly holding the positive wire end post of the bulb.

7. While holding the positive wire end post firmly, remove the end cap and washer (if supplied) from the bulb. Insert the screw end of the bulb into the center of the reflector and through the hole to the back side of the reflector. ***Make sure the bulb does not touch either side of the reflector***. Make sure to include the washer and black wire and screw on the end cap in order to secure the bulb.

8. Unscrew the positive wire screw from the black assembly above the mirror labeled LAMP. Insert the screw through the positive wire closed ring (connector) of the lamp. Locate the screw hole labeled LAMP above the mirror and tighten down the screw.

   Be careful not to lose the screw. It is important that the positive wire from the lamp is firmly attached in order to achieve proper contact.

   The positive lead wire of the lamp should be kept 10-15mm or more away from any part, including the filter. A closer distance may cause the leakage of high tension and result in non-ignition of the lamp, especially for an old lamp.

   The gas evacuation tip of the lamp should be positioned upwards at 12 o'clock.

9. Replace the lamp house top cover. Reconnect the white connector and replace the four (4) white thumbscrews.

10. Plug the power cord into the projector socket and suitable line outlet (120v, 60 Hz). Turn the power on/off switch to on. Note that the ***green power-on indicator*** should be on.

11. Turn the projector on by turning on the round operating switch. Rotate the round operating switch first clockwise to the center position, then to the lamp on position. The lamp should start to glow. It will take a few seconds to come up to full brilliance. If you hear a clicking sound, but the bulb fails to strike, check to make sure that the positive wire is securely tightened down.

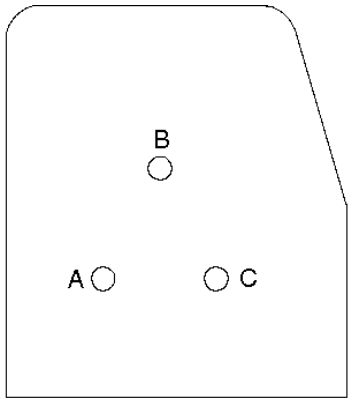
12. In order to see an image projected from the projector, it will be necessary to open the shutter in the slide projector. To do this, insert a slide into the slide film gate (the slot on top of the projector). An empty slide holder without film or glass is best for lamp adjustment purposes.

13. If your Xenon projector is a 560/750DM, the blades of the Dissolve Module may have to be opened . See the section called Connecting the Dissolve Interface Unit to the Dissolve Module.

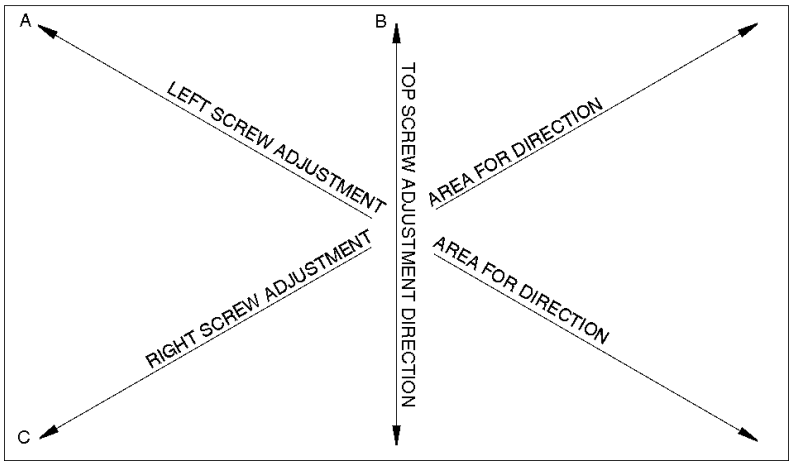
14. After installing the bulb, it will be necessary to adjust the bulb position in order to render even illumination across the screen. Position the projector so the light from the lens is directed onto a reasonably good screen.

    Facing the projector from the rear, three (3) adjustment holes are located on the lamp house cover's left side. Remove the black rubber plugs to expose the three (3) adjustment holes. The larger Phillips screwdriver may inserted through each hole to adjust the lamp position.

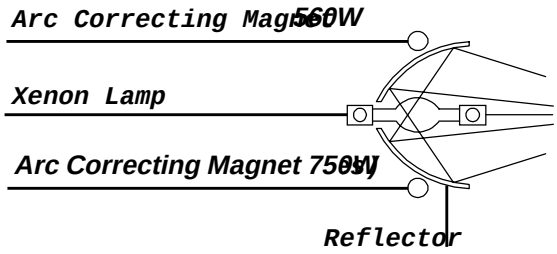
    The left adjustment (A) will move the image of the light along a diagonal from top left to bottom right and back. The center adjustment (B) will move the image up or down. The right adjustment (C) will move the image along a diagonal from bottom left to top right. Try to adjust the image of the light on the screen for the most even illumination across the screen.



Lamp House Cover
(side view)



Note: An arc correcting magnet is used to make an even flow of electrodes to prevent a partial overheat of the lamp. In the arrangement, as illustrated, the magnet is installed in such a position that the N-pole of the magnet is toward you. The condition is similar to that of a lamp operated in the vertical position.



15. The projector is now ready to operate. Plug in the remote control, if required.

16. If you notice any damage to your slides it means that your lamp is not properly adjusted. Please readjust your lamp. See #13.

Power Supply

Supply a.c. power of the rated voltage and frequency. The power consumption is about 1.5KW. The power line must be capable of handling the total current for the entire system. Cables must be connected tightly. (120V - 12.5 amp, 220V- 6.25 amps).

Projection

1. ***Place the projector on a flat, stable surface*** and adjust the leveling feet by turning. This prevents the projector from rocking.

2. Make sure that the power on/off switch is in the OFF position, then plug the power cable into the power connector and tighten.

3. Turn the power on/off switch to ON . Note: the green power indicator should be lit.

4. Turn the round operating switch to the fan position. The blower fan will start.

5. Turn the projector on by rotating the operating switch to the lamp on position. The lamp should start to glow. It will take a few seconds to come to full brilliance. If you hear a clicking sound, but the bulb fails to strike, check to make sure that the positive wire is securely tightened down and that there is no leakage to the ground.

6. Load the projector with a slide tray. Align the "0" position of thetray with the slide gate. Hold the select lever and check that the tray can be rotated smoothly with your hand.

7. To advance the tray, press the slide forward button once, then the tray will advance by one step to the "1" position.

8. To move the tray backward, press the slide reverse button once, then the tray will move backward by one step.

9. Connect your remote control device for remote operation.

10. To remove the slide tray, hold down the select button, rotate the slide tray with your hand and bring the "0" position of the tray to the slide gate. Lift the slide tray.

11. To focus the slide picture, turn the focus knob on the projector or press focus on your remote control device.

12. Tilting, or the adjustment of optical axis, is done by adjusting the four adjustable legs at the corners of the projector.

13. When turning the projector off, rotate the operating switch counter clockwise one step. The lamp will go off, but the fan will continue to operate. Allow the fan to operate for a few minutes to properly cool the bulb, then shut off the fan by turning the operating switch to the OFF position. Turn the power switch to the OFF position.

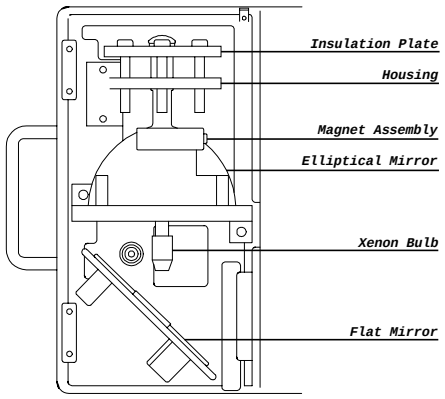
    For added safety, your projector has a built-in fan/delay circuit. If you turn the projector completely off without cooling the lamp, the temperature probe will keep the fan running until the projector cools down.

Cleaning the Mirrors & Optical System

The flat mirror in the 560 Series is aluminum coated and works as a surface reflecting mirror. In the 750 Series, there is a heat absorbing flat mirror.

Take care not to leave finger prints, stains or scratches on the surface of the elliptical mirror, the flat mirror or the Xenon bulb.

If the mirrors are smudged or stained, wipe them off gently with a lens cleaner or a piece of gauze wetted with a mixture of alcohol and ether.

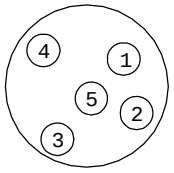


Remote Control

Connect the standard Kodak Ektgraphic-III Remote Control to the round, 5-pin remote control socket on the rear of the projector. This will allow you to control forward/reverse and focus.

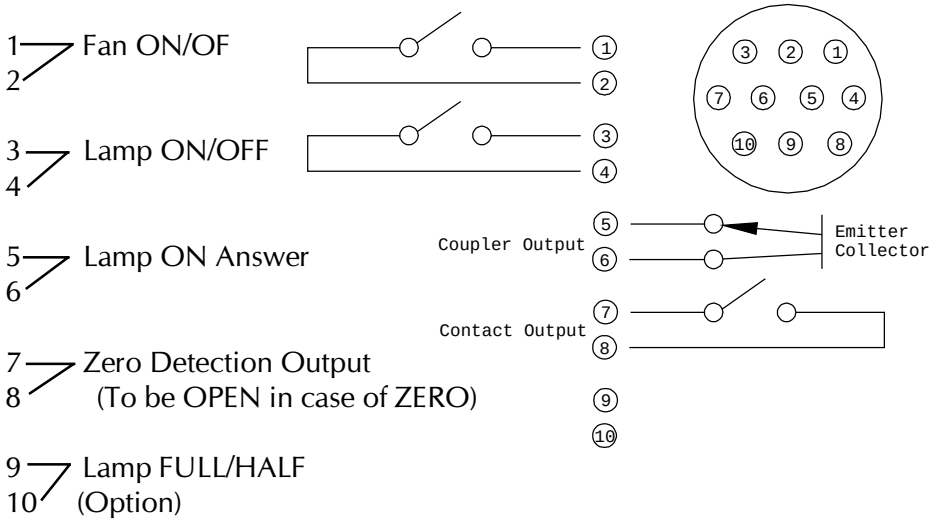
REMOTE-1 Connector (DIN 5P)
This connector is used with standard Kodak Ektagraphic-III Remote Controls.

1. Focus In
2. Slide Forward
3. Slide Reverse
4. Focus Out
5. COM



REMOTE-2 Connector (Receptacle10P)

This connector is used to turn the Xenon projector and lamp on/off by remote control. It ties into the control system.



Note: For pins 5&6 above, the transistor is an NPN type. Information goes from Collector to Emitter.

Lamp Adjustment

The lamp can be positioned for uniform screen illumination by adjusting the screws with a screwdriver through three (3) holes on the side of the lamp house.

1. Position the projector so the light from the lens is directed onto a reasonably good screen.

2. Facing the projector from the rear, three (3) adjustment holes are located on the lamp house cover's left side. Remove the rubber plugs to expose the three (3) adjustment holes.

3. The larger Phillips screwdriver may be inserted through each hole to adjust the lamp position. The left adjustment (A) will move the light along a diagonal from top left to bottom right and back. The center adjustment (B) will move the image up or down. The right adjustment (C) will move the image along a diagonal from bottom left to top right.

4. Try to adjust the image of the light on the screen for the most even illumination across the screen. It is best to use an empty slide frame without film or glass for this adjustment.

When your lamp is not adjusted properly, it will not produce the best possible illumination and you might damage your slides or slide mount.

Use the following procedure to reposition the lamp.

1. Turn the lamp and fan on by following the procedure outlined above. If you have installed a lens on the Xenon projector, remove it at this time.

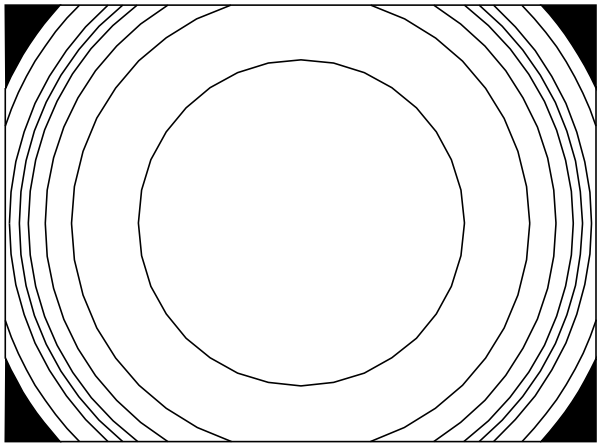
2. Using your finger, open the film gate by pressing the slide clamping mechanism back. The blank slide shutter should pop down and the screen should be illuminated.

3. By adjusting the three (3) screws on the side of the lamp house top cover in a clockwise direction, you will be pulling the lamp toward the elliptical mirror.

4. Try to get a cone of light on the screen. When the cone of light is visible, reinstall the lens on the Xenon projector.

5. By turning the screws in the proper direction, move the cone of light so that it is in the middle of the screen area. This may take a little trial and error, but it can be done.

6. When you have accomplished the centering of the cone of light on the screen, install a slide frame (without film or glass). Readjust the screws so that the cone of light fills the slide area with no hot spots and so there is no bluish coloring or fringes at the slide area edges.



7. Reinstall the rubber plugs in the adjusting holes for optimum protection.

Explanation & Remedy

Slide burning and picture flicker are problems common to Xenon projectors. The following is an explanation and remedy for these problems which can occur in any Xenon projector that is not adjusted properly.

1. Both problems, slide burning and picture flicker, are usually caused by the same thing – a misalignment of the Xenon lamp position.

2. If the slide or the slide mount is burning, this is definitely caused by a misalignment of the Xenon lamp position.

3. The flickering is caused by the physical nature of the Xenon lamp itself. Navitar has incorporated a magnet assembly above the lamp to solve this problem.

Lamp Adjustment Solution

Before you try to fix either problem caused by misalignment of the Xenon lamp, please read the sections "Installing a New Lamp" and "Adjusting the Lamp Position."

Proper adjustment of the three external lamp adjustments will provide a brilliant and uniform illumination without any hot spots on the screen. When this adjustment is done properly, the flickering may correct itself.

The Xenon lamp contains two probes inside a quartz envelope containing Xenon gas. When a very high current and voltage is introduced across these probes, the Xenon gas is ionized and an arc of light is produced between the probes. Within the envelope, there are some heavier ions which will jump back and forth between the brilliant light path between the probes. This jumping of heavier ions is what produces the flickering.

Your Navitar Xenon projector has a built-in magnet assembly which is placed across the ellipsoid mirror in the lamp area. This pulls the heavier particles (ions) to one side so that their path is in step with the main stream of light, stopping the flicker.

This means that if the lamp positioning is not correct, the lamp may have been pulled away from the magnetic force that draws these heavy particles to the main stream of particles. Therefore proper lamp adjustment for even illumination and brilliance should fix both of these problems.

Magnet Adjustment Solution

If the flickering problem is still apparent after readjusting the lamp position, a magnet adjustment may be needed.

1. ***Please follow all safety precautions listed in this manual for proper handling of the lamp.*** You will need to remove the top cover and operate the projector with the lamp cover off. Please note that the power interlock switch will need to be depressed in order to keep the lamp on.

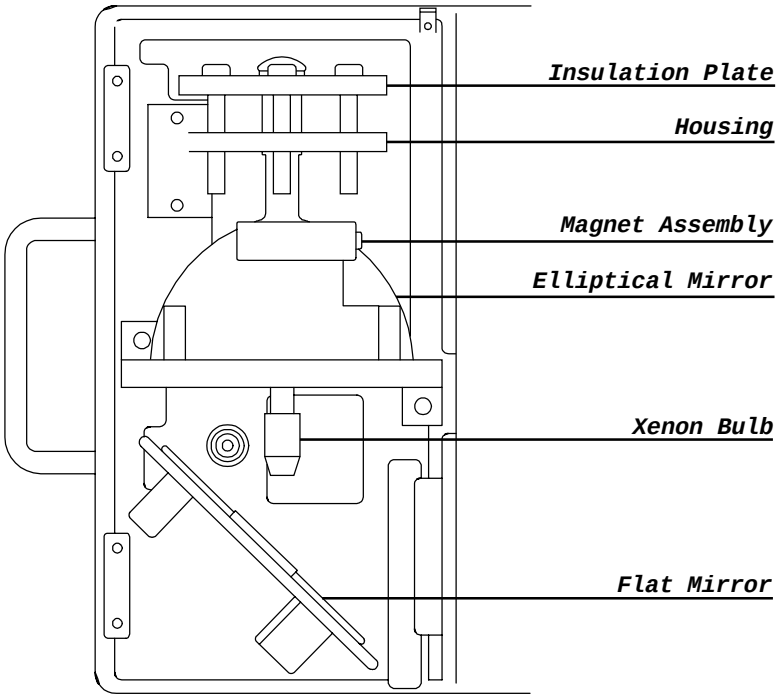
2. Remove the four white screws and lift off the top cover.

3. Locate the black magnet above the reflector. If adjustment is re quired, loosen the Phillips head screw holding the magnet cylinder to the bracket.

4. While observing the illuminated screen, slowly turn the magnets until he flickering stops.

5. Retighten the screw and reinstall the lamp house cover.

The above two procedures should correct any problems you are having with burning slides and image flickering.



Areas of High Humidity

In room environments with high humidity, the use of a high powered Xenon slide projector or modified halogen lamps may cause the moisture that is trapped in your glass slides to appear as a moving spot during your presentation.

As the glass slide heats up, the moisture trapped inside will move as a spot until it disappears totally. The moisture spot is on the inside glass surface facing the light of the projector. The moisture will completely disappear during your presentation.

Simple Solutions

Once you understand the cause of the moisture problem, there are some very simple solutions to prevent it.

1. Keep your slides in a moisture-free environment before your presentation. You can keep the tray in a plastic bag with silica desecant which will soak up any moisture.

2. Use cardboard or plastic mounts when humidity is high.

3. Use new Wess Mount AHX high definition glassless slide mounts. Free samples were enclosed with your Navitar Xenon projector. For more information on AHX glassless slide mounts, call Wess Plastic, Inc. at 1-800-487-9377 or 516-231-6300 or fax them at 516-231-0608.

   According to Wess Plastic, Inc., their AHX glassless slide mount is geared to hold the film in place for the best possible image sharp ness. Two rows of eight registration pegs rigidly stretch the film to prevent "popping" as the slide is heated in the projector. Film is mounted by first placing it over the lower row of pegs, and then hooking it over the upper row. It is then pulled tight and automati cally seated by simply closing and squeezing the hinged mount cover. Rigidity is also aided by the 3mm thick heat-resistant plastic. We recommend using the AHX with "professional" (80 capacity) slide trays.

4. Your problems with moisture will decrease when the outside humid ity goes down.

Attaching a New Dissolve Module

If you ordered the NAVITAR XENON 560/750DM, the dissolve module has been attached at the factory. Skip to the section "Connecting the Dissolve Interface to the Dissolve Module."

Make certain the projector is turned off and the power cord is disconnected before proceeding.

1. Remove the four (4) white thumbscrews attaching the lamp house top cover.

2. Remove the top cover and disconnect the white connector.

3. Remove the screws holding the cover plate located on the right hand side of the main lamp cover (when viewed from the rear). Once the cover plate on the lamp cover has been removed, you will see that the lamp cover has been pre-cut to fit over the shutter blades of the dissolve module.

4. To attach the dissolve module, locate the three (3) pre-drilled holes located on the right hand side of the projector base (visible when the lamp cover is removed). Secure the three (3) screws that are supplied with the dissolve module into the pre-drilled holes. The shutter blades fit between the flat (plane) mirror and the condenser lens.

5. Once the dissolve module is secured, connect the white connector, located behind the plane mirror, to the one supplied with the dissolve module.

6. Reattach the lamp house cover and replace the four (4) white screws securing the top cover.

Connecting the Dissolve Interface to the Dissolve Module

Connect the dissolve interface cords to the corresponding dissolve module on the Xenon projector: Cord A to Projector 1, Cord B to Projector 2 and Cord C to Projector 3. Turn the power switch on the dissolve interface unit to the ON position.

From time to time, it will be necessary to open the shutter blades of the dissolve module. The shutter blades may be opened two ways, manually or automatically.

By opening the door of the dissolve module, you will have access to the shutter knob. Manually, the shutter blades may be opened by rotating the shutter knob, assuming the dissolve interface is not connected.

The shutter blades can be opened automatically by turning the three set-up switches on the dissolve interface box to the ON position. Remember to return these three switches to the OFF position to permit the dissolve equipment to operate the shutter during your multimedia show.

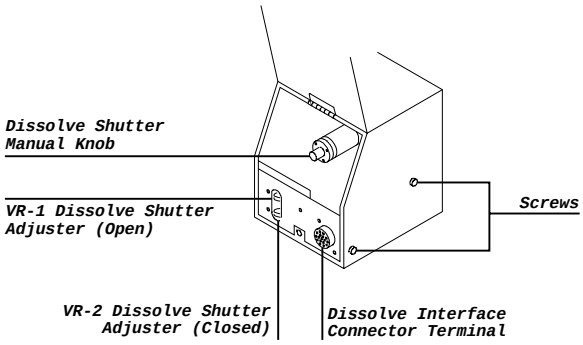
Connect the dissolve equipment (AVL/Dataton/etc.) to the dissolve interface unit. The dissolve interface will appear as a simulated projector to the dissolve controller while it converts the signals from the dissolve controller to operate the Xenon projector dissolve mechanism.

Dissolve Shutter Manual Knob

VR-1 Dissolve Shutter Adjuster (Open)

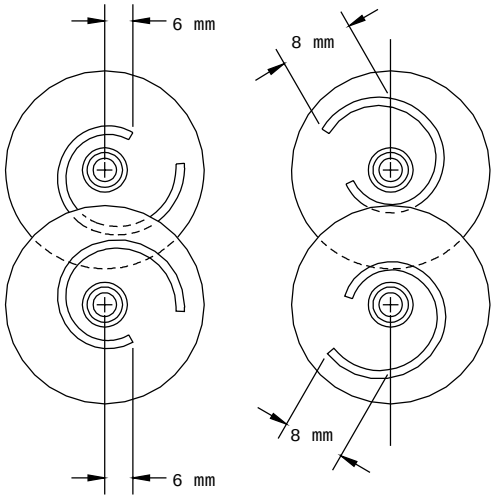
VR-2 Dissolve Shutter Adjuster (Close)

Dissolve Interface Connector Terminal



Adjusting Dissolve Shutter Open/Close

(For the dissolve module of the 560DM/750DM projector.) Plug in the AVL Dove X2 or Dataton PAX Dissolve Controller, as well as the Navitar Dissolve Interface unit.



1. Remove two (2) screws on the side of the dissolve module and take off the square cover on the dissolve module. Turn on the power switches for the AVL/Dataton Dissolve Controller and the Navitar Dissolve Interface unit.

2. Turn off the three set-up switches on your Navitar Dissolve Interface unit. Rotate the variable resistor "C" to the position between the cam and pin as it is shown in the diagram.

3. Turn on the three set-up switches on your Navitar Dissolve Interface unit. Rotate the variable resistor "O" to adjust the relationship between the cam and pin as shown in the diagram.

4. After the above adjustment, repeat the on/off action of the set-up switch several times and check that the position in each time coincides with the marking. Alternately repeat the adjustment of 2 and 3 until satisfactory results are achieved.

Warning **Δ**

Projector must be on a flat, stable surface.

The Xenon lamp is under pressure. Protect yourself from the unlikely, but possible explosion of the lamp by wearing protective glasses and clothing.

Do not open the lamp house cover during operation. Do not look at the burning lamp directly. During lamp position adjustment, employ a pair of good ultraviolet prevention eye glasses.

Do not apply stress or shock to the lamp even when the lamp is not burning. Take extra care when shipping the projector with the lamp inside.

Before removing the lamp house cover, be sure to unplug the projector.

Ground the projector electrically for safety.

Before changing the lamp, read the safety precautions and observe them.

Be careful not to connect the lamp to the wrong polarity. Supply low ripple current for lamp.

Avoid projection in an extreme downward inclination. This may cause your lamp to flicker.

Take care of cooling the lamp after usage.

Do not repeatedly perform the lamp on/off operation.

Do not disturb the air flow by placing any foreign matter in front of the vent holes of the projector.

For lamps other than the ozone- free type, use effective room ventilation.

Do not touch the lamp with naked fingers. When required, hold the bulb with a piece of gauze or fabric to keep the bulb free from finger prints. Hold lamp by the ends.

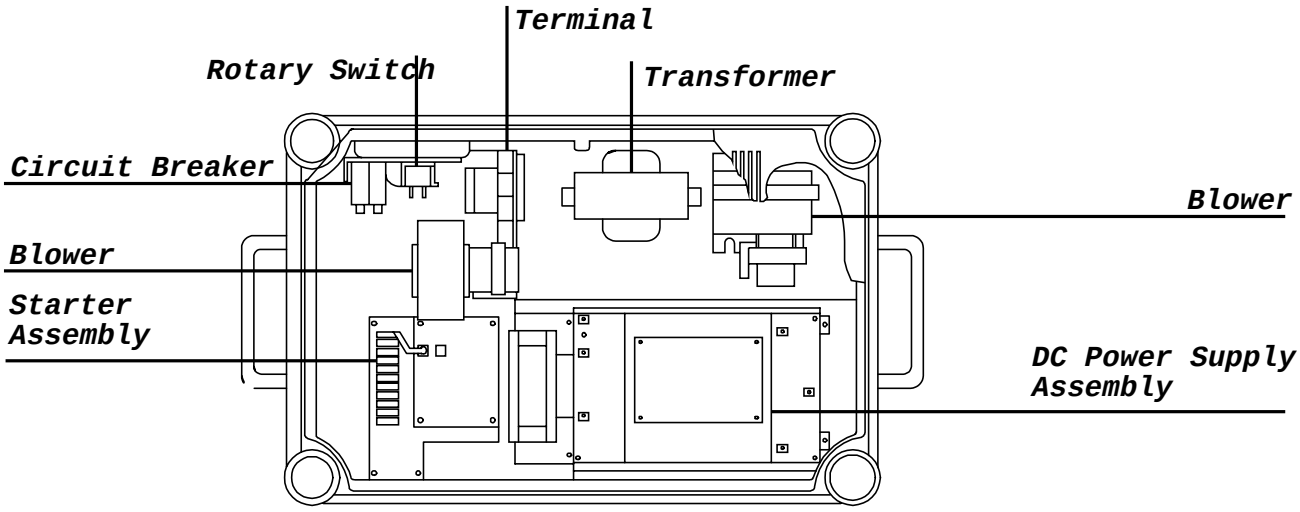
Operate the Xenon lamp under the rated maximum current.

Lamp

The Xenon lamp is an excellent light source for slide projectors because it produces brilliant light of high color temperature. This is an ozone-free lamp. The gas pressure enclosed within the bulb is about 10 atmospheres when cold and will rise to 30-40 atmospheres during operation. Since high voltage of more than 15,000V is required to ignite the lamp, a starter, including a high tension generator, is provided. Careful consideration for safety is necessary. To prevent the generation of ozone gas by radiated ultraviolet rays, the bulb contains a small quantity of titanium.

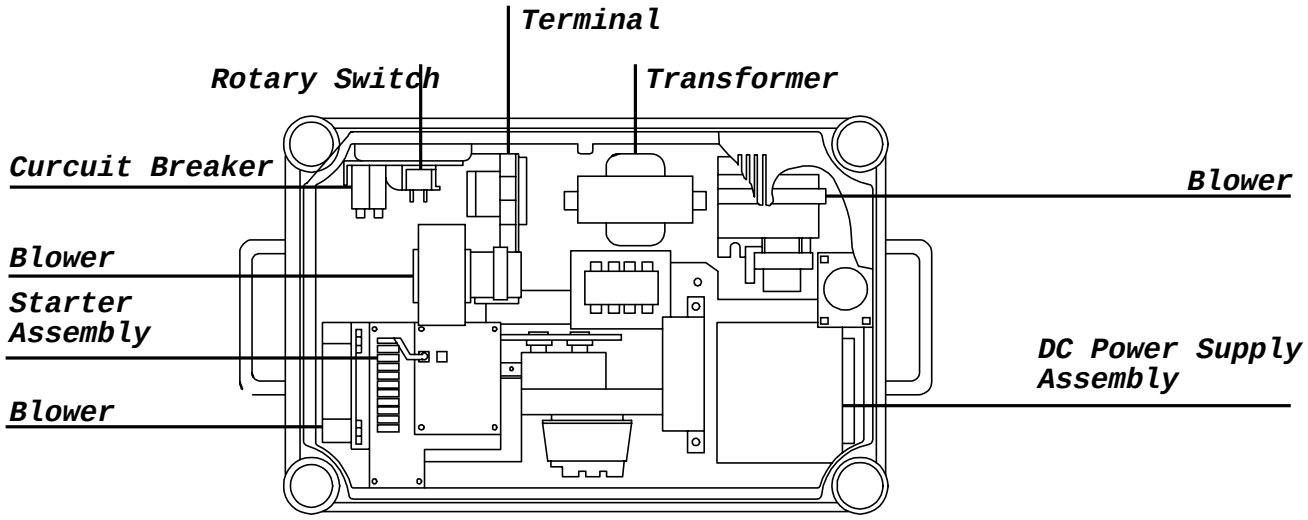
The Xenon bulb has a rated life of 500-1000 hours. The bulb life is shortened by turning the lamp on and off (striking the lamp). You will achieve a longer bulb life by leaving the projector lamp on for longer periods of time rather than repeatedly turning the lamp on and off during your presentation.

560 Series



1.	**Starter Assembly**	1A816S029-01
2.	**Blower**	1A165F044-01
3.	**Circuit Breaker**	1A151C011-03
4.	**Rotary Switch**	1A154A084-01
5.	**Terminal**	1J171Y043-10
6.	**Transformer**	1A164A101-01
7.	**Blower**	1A165F038-01
8.	**DC Power Supply Assembly**	1A816C608-01

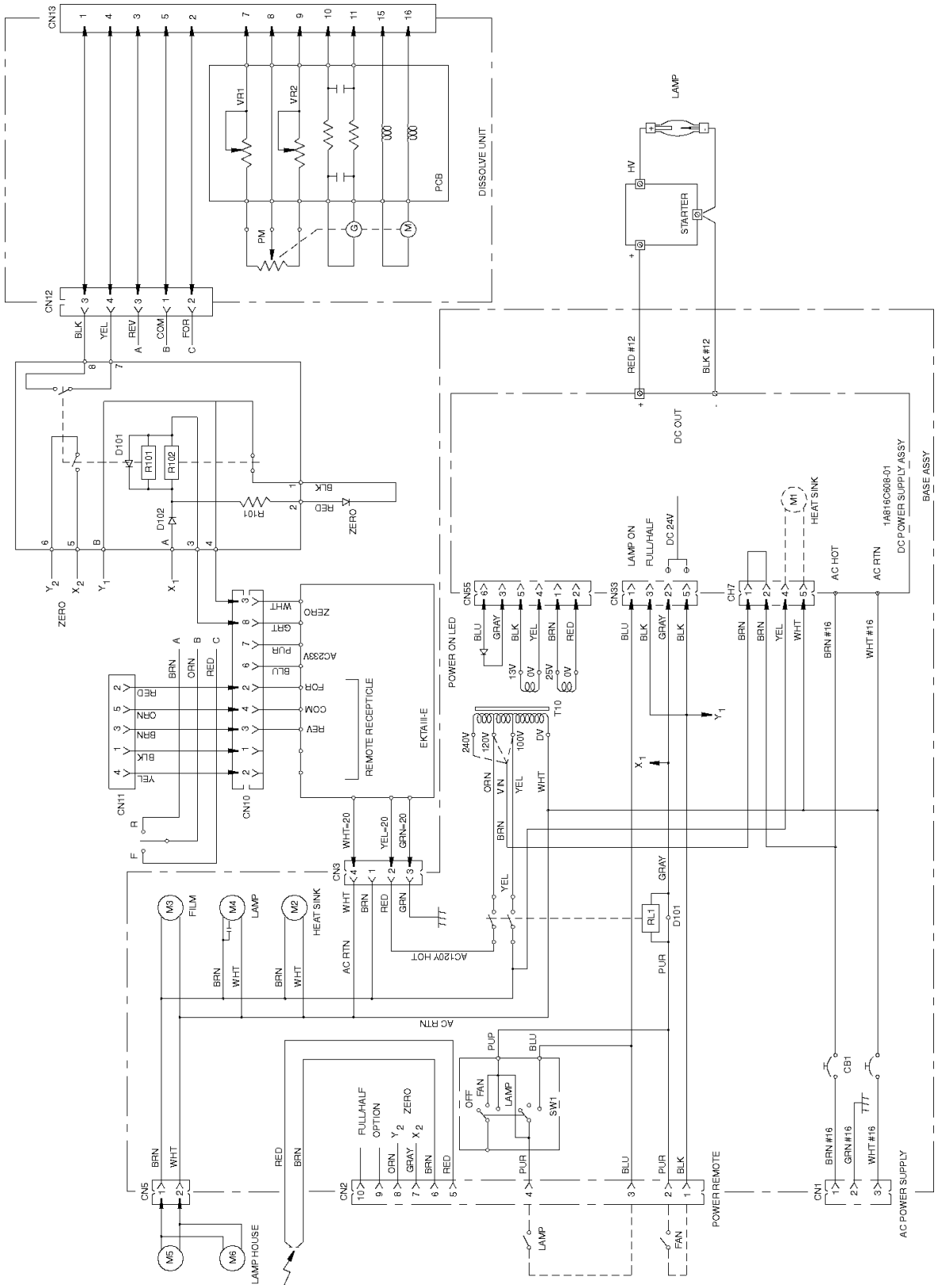
750 Series



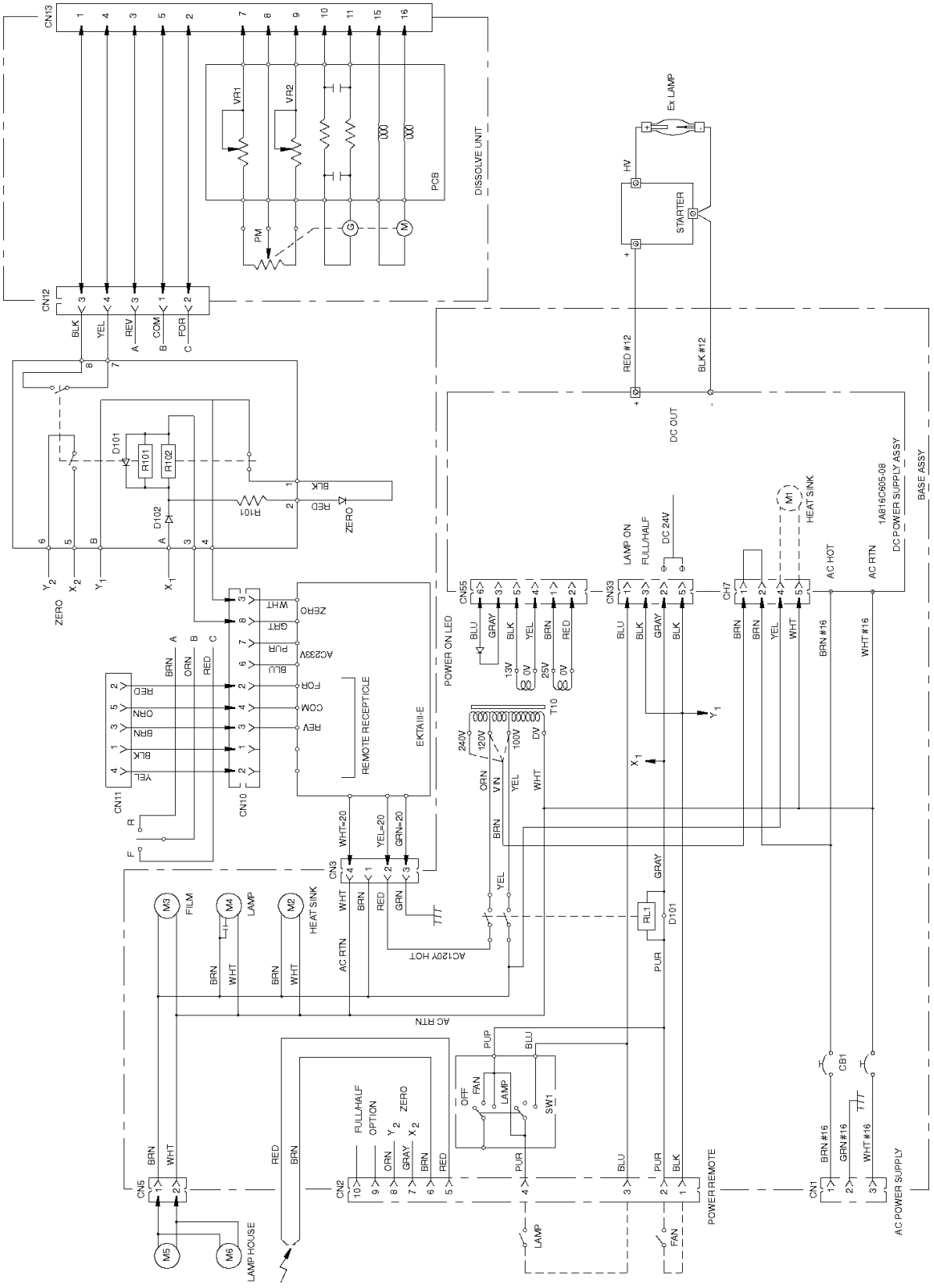
1.	**Starter Assembly**	1A816S029-02
2.	**Blower**	1A165F045-01
3.	**Circuit Breaker**	1A151C011-01
4.	**Rotary Switch**	1A154A084-01
5.	**Terminal**	1J171Y043-10
6.	**Transformer**	1A164A101-01
7.	**Blower**	1A165F038-01
8.	**DC Power Supply Assembly**	1A816C605-09
9.	**Blower**	1A165F033-06

SYMPTOM	*CAUSE/REMEDY*
Power is not supplied.	Is the power cord connected? Replace the power cord. Is there a connection to the main switch? Replace the main switch: P/N 1A154A084-01 (560 or 750 Series).
Circuit breaker CB1 trips when main switch is turned to LAMP position.	There may be a short circuit of the fan motor or transformer T-10. Replace the defective part (depending on your model) : P/N 1A166A106-03 P/N 1A669A140-01 (M4) P/N 1A6699A107-01 (M3) P/N 1A165F033-06 (M2) P/N 1A165F039-01 (M5, M6) P/N 1A165F033-06 (M1) P/N 1A164A101-01 (T-10)
Xenon lamp will not start (starter spark is detected when the main switch is turned to the LAMP position).	Is the lamp positive wire too close to the metal of the body frame? Change the position of the lamp wire. It should be at least 15mm from all metal. There may be a defective Xenon lamp. This is one indication that the lamp life has expired. Replace the lamp (P/N XB-560 or P/N XB-750, depending on your model).
No starter spark is detected when the main switch is turned to the LAMP position.	85V DC may be across the starter or the starter may be defective. Replace the starter with P/N 1A685A088-01 (560 Series, no housing), P/N 1A159A035-01 (560 Series, black housing) or P/N 1A817S006-01 (750 Series). 70V or less is across the starter, +12V is not present between pins 15 & 14 of IC Q1. Check the connector: CN12 P/N 1A172A058-03 (560 Series) or CN52 P/N 1A172B070-03 (750 Series).
Dark Xenon lamp.	The lamp current may be under the current of 25 Amps for the 560 Series or under 37.5 Amps for the 750 Series. Adjust VR11 of pulse width PCB for the 560 Series or VR1 of pulse width PCB for the 750 Series. The lamp may be worn out. Replace the lamp (P/N XB-560 or P/N XB-750, depending on your model).
Dark picture or uneven illumination of image.	The lamp or optics may be improperly positioned. Adjust the lamp position and check alignment of reflectors and the reflector holders. The Xenon lamp may be defective. Replace the lamp (P/N XB-560 or P/N XB-750, depending on your model). NOTE: DON'T BREAK THE PAINT ON THE REFLECTOR MOUNT SCREWS TO CHECK IF THEY ARE LOOSE. A COMMON PROBLEM IS THAT THE REFLECTOR HAS BECOME LOOSE FROM REPEATED SHIPPING.
The biggest problem that will occur with these units is failure to perform preventative maintenance. After a unit has been shipped a number of times it is a good idea to check the electrical connections and to look for loose screws. If loose screws are found and tightened, you will save many problems later.	

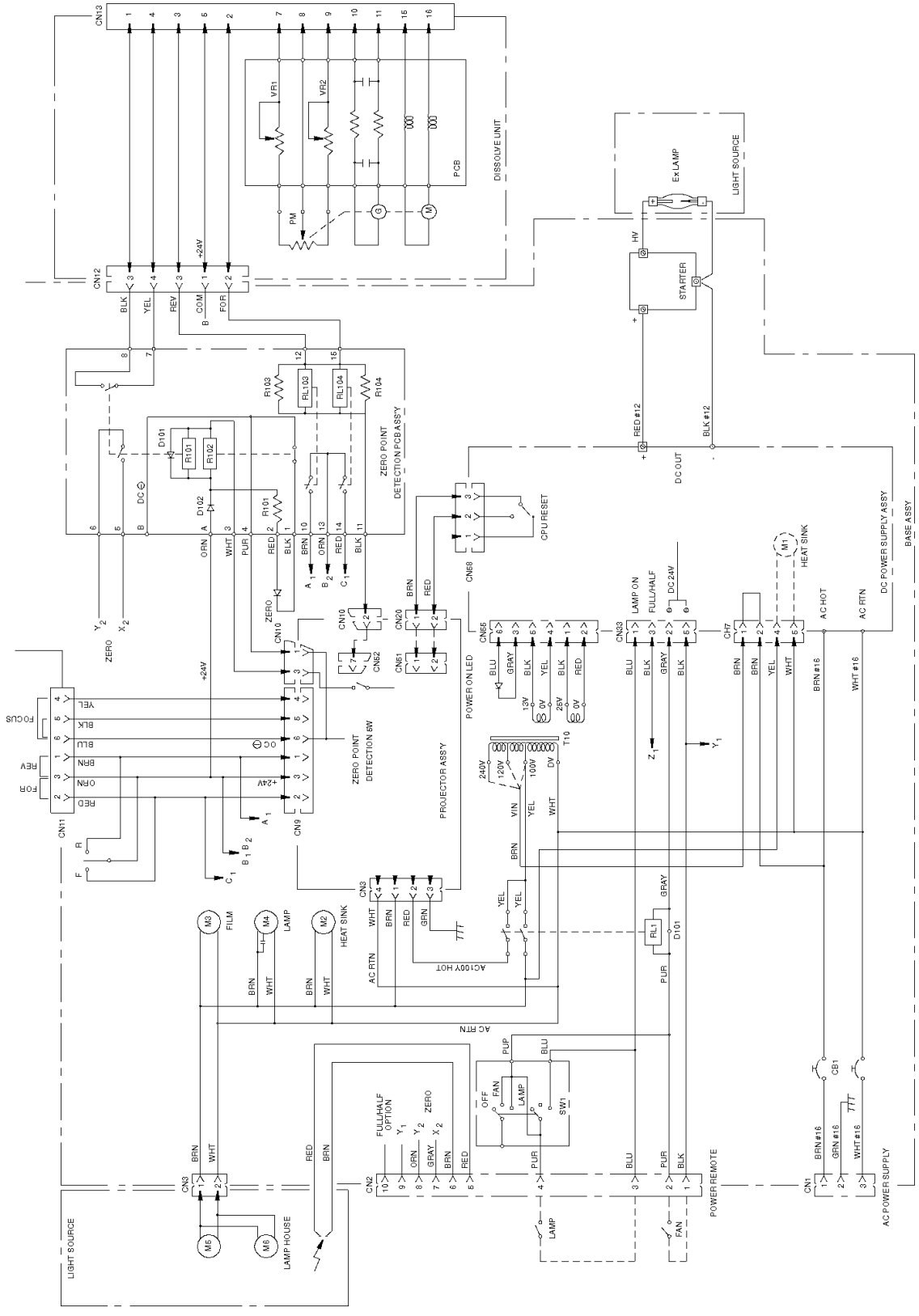
560AF/DM


CN13
DISSOLVE UNIT
VR1
VR2
PCB
PM
CN12
BLK
YEL
REV
COM
FOR
LAMP
HV
STARTER
RED #12
BLK #12
DC OUT
D101
R101
R102
D102
R101
ZERO
BLK
RED
CN11
CN10
REMOTE RECEPTICLE
EKTA III-E
POWER ON LED
CN55
CN33
LAMP ON
FULL/HALF
DC 24V
CH7
HEAT SINK
AC HOT
AC RTN
1A816C608-01
DC POWER SUPPLY ASSY
BASE ASSY
T10
240V
120V
100V
CN3
WHT=20
YEL=20
GRN=20
AC120V HOT
AC RTN
M3
FILM
M4
LAMP
M2
HEAT SINK
RL1
D101
PUR
GRAY
PUP
BLU
OFF
FAN
LAMP
SW1
CN5
CN2
FULL/HALF
OPTION
ZERO
LAMP HOUSE
M5
M6
POWER REMOTE
CB1
BRN #16
GRN #16
WHT #16
CN1
AC POWER SUPPLY

750AF/DM


CN13
DISSOLVE UNIT
VR1
VR2
PCB
PM
Ex LAMP
HV
STARTER
CN12
BLK
YEL
REV
COM
FOR
RED #12
BLK #12
DC OUT
D101
R101
R102
D102
ZERO
BASE ASSY
1AB16C605-08
DC POWER SUPPLY ASSY
HEAT SINK
AC HOT
AC RTN
LAMP ON
FULL/HALF
DC 24V
CN55
CN33
CH7
POWER ON LED
REMOTE RECEPTICLE
EKTAIII-E
T10
240V
120V
100V
CN11
CN10
CN3
WHT=20
YEL=20
GRN=20
AC120V HOT
M3
FILM
M4
LAMP
M2
HEAT SINK
RL1
PUR
GRAY
CB1
BRN #16
GRN #16
WHT #16
CN5
CN2
FULL/HALF
OPTION
PUP
BLU
OFF
FAN
LAMP
SW-1
POWER REMOTE
AC POWER SUPPLY
LAMP HOUSE
M5
M6

560 & 750 RAK/RARS232



Optical System	Brightness (Lux)	4300
	Color Temperature	5800ºK
	Lamp	Quartz-Xenon, high pressure arc
	Power	550 watts
	Bulb Life	500-1000 hours depending on usage
	Reflector	Coaxial type, 3-way adjustable
Power Supply	Voltage	120 VAC, 50/60 Hz (220/240V available)
	Power Usage	9 amps
	Internal Cooling	5 fans
	Built-in Fan Delay	3-5 minutes after the power is turned off
Slide Projector	Projector	Kodak Ektagraphic-III AMT (The Random Access Series uses a Navitar ColorPro projector)
	Manual Controls	Forward/Reverse, Focus, Auto Focus On/Off, 3-22 second timer
	Slide Size	35mm Slide
	Slide Tray	80 Slide Tray recommended
Dissolve Shutter Response Time	560DM/750DM	0.2 seconds
	Leveling Feet	Individually adjustable screw type feet
	Dimensions	14.3″W x 21.6″D x 14.9″H (363mmW x 549mmD x 378mmH)
	Color	Beige
	Weight	45 lbs., 60 lbs. boxed (20.5 Kg.)
Random Access Models	RS-232 Control	560RARS-232
	Keypad Control	560RAK

750 Specifications

Optical System	Brightness (Lux)	5400
	Color Temperature	6450ºK
	Lamp	Quartz-Xenon, high pressure arc
	Power	750 watts
	Bulb Life	500-1000 hours depending on usage
	Reflector	Coaxial type, 3-way adjustable
Power Supply	Voltage	120 VAC, 50/60 Hz (220/240V available)
	Power Usage	15 amps
	Internal Cooling	7 fans
	Built-in Fan Delay	3-5 minutes after the power is turned off
Slide Projector	Projector	Kodak Ektagraphic-III AMT (The Random Access Series uses a Navitar ColorPro projector)
	Manual Controls	Forward/Reverse, Focus, Auto Focus On/Off, 3-22 second timer
	Slide Size	35mm Slide
	Slide Tray	80 Slide Tray recommended
Dissolve Shutter Response Time	560DM/750DM	0.2 seconds
	Leveling Feet	Individually adjustable screw type feet
	Dimensions	14.3″W x 21.6″D x 14.9″H (363mmW x 549mmD x 378mmH)
	Color	Beige
	Weight	55 lbs., 67 lbs. Boxed (25 Kg.)
Random Access Models	RS-232 Control	750RARS-232
	Keypad Control	750RAK

An ozone-free type lamp is used for this projector. The ratings are as follows:

560 Series

560AF/560DM
560RAK/560RARS-232

Navitar Part #	**XB-560**
Rated Input Power	550W
Rated Current	25A DC
Lamp Voltage	22 ± 2V DC
Color Temperature	5800
Operating Position	Horizontal ± 15
Lamp Life	500-1000 hours
Brightness (Lux)	4300

750 Series

750AF/750DM
750RAK/750RARS-232

Navitar Part #	**XB-750**
Rated Input Power	750W
Rated Current	37A DC
Lamp Voltage	20 ± 2V DC
Color Temperature	6450
Operating Position	Horizontal ± 20
Lamp Life	500-1000 hours
Brightness (Lux)	5400

To order a replacement lamp, please contact your local AV dealer or call Navitar, Inc. at 1-800-828-6778.

General

The dissolve interface receives signals from an AVL/Dataton Dissolve Controller and controls three (3) 560DM/750DM Series Xenon Slide Projectors.

Components

Component	Description	Quantity	Weight
MDC200	12.7″W x 13.2″D x 3.7″H 324W x 335D x 94H (mm)	1 each	17 lbs. (7 Kg.)
Connection Cord	Length 9′	3 each	
Power Cord	Length 16′	1 each	

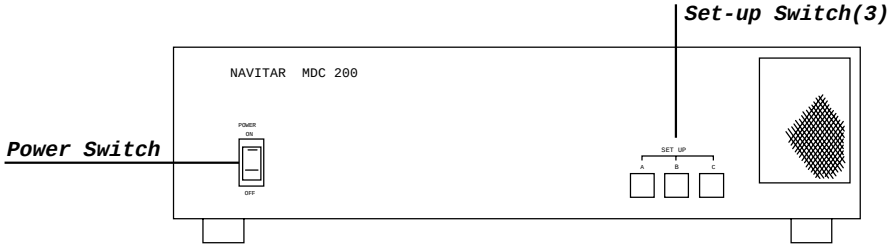
Specifications

Power Supply	115V 50/60HZ standard (220V available, to be specified when order is placed)
Power Consumption	120VA
Ambient Temperature	5-35ºC
Use	Continuous use possible
Dimensions	12″W x 13.2″D x 3.7″H (324mmW x 335mmD x 94mmH)
Weight	15 lbs.
Color	Black

Features

Power Switch
The main power switch for this unit. When the switch is turned on, the internal lamp lights.

Set-Up Switch
Turn the three set-up switches to the ON position (switch is pushed in) and the shutter of the dissolve module on the 560DM/750DM Xenon Slide Projector will open. This will be useful for adjusting pictures on the screen before the slide show. ***When the show is ready to start, turn the three set-up switches to the OFF position***. When the switch is turned on, or when the SHUTTER OPEN signal is sent from a dissolve controller, the LED is lit in this switch.



AC In Connector
Connects the power cord attached to the unit.

50 or 60Hz Change Switch
Depending on the cycle of input power, turn to 50 for 50Hz and turn to 60 for 60Hz.

Fuse
Use a fuse with a 2A AC250V rating.

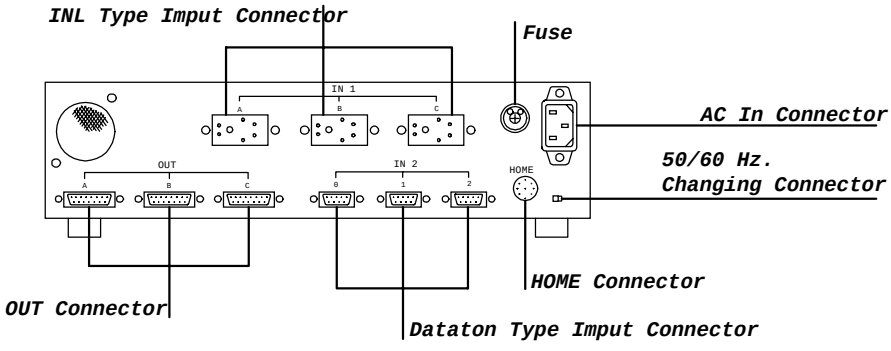
AVL Type Input Connector
Connect to a dissolve controller such as the AVL DoveX2. Use Ektagraphic type for a connector.

Dataton Type Input Connector
Use only when Dataton's PAX is used as the dissolve controller. Connect MDC200 with PAX by a cable that is supplied as an option.

Note: An AVL Type Input Connector and a Dataton Type Input Connector cannot be connected simultaneously to a dissolve controller.

OUT Connector
Connect to each dissolve connector (16P) of the 560DM/750DM Xenon Slide Projectors.

HOME Connector
In the case that PAX is used, this connector is not used. Do not connect anything. (Refer to Safety Precautions section.)



Operation

Connect the Navitar Dissolve Interface to your 560DM/750DM Series Xenon Slide Projector and an AVL/Dataton dissolve controller. Connect the OUT Connector with each dissolve connector (16P) of the corresponding 560DM/750DM Xenon Slide Projector by the attached connection cables. Connect a dissolve controller using the AVL Type Input Connector. Connect PAX to the Dataton Type Input Connector by a cable that is supplied as an option.

Check that the power switch is in the OFF position, then connect the power cord and turn on the main power switch.

Turn on the set-up switch on the dissolve interface unit and adjust the position and focus of each picture in the slide projector.

On completion of your picture adjustment, turn off the set-up switch.

Now you are ready to operate your dissolve show.

Safety Precautions

Since the MDC200 Dissolve Interface deals with a phase controlling signal, it is absolutely necessary that the phase of the MDC200 completely corresponds with the power supply of the dissolve controller. Take power for the MDC200 from the AVL/Dataton Dissolve Controller. If you take power from other sources, there may be a difference between phases and the MDC200 may not operate properly.

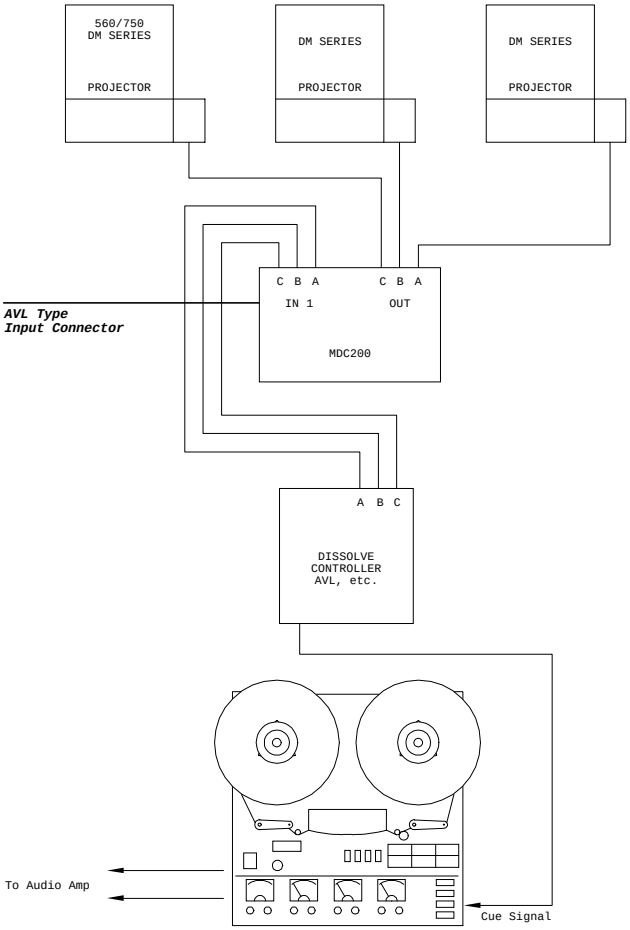
Since MDC200 deals with phase controlling signals, it will not operate properly when there are irregular wave forms from the power supply. Make the wave form regular before operating the MDC200.

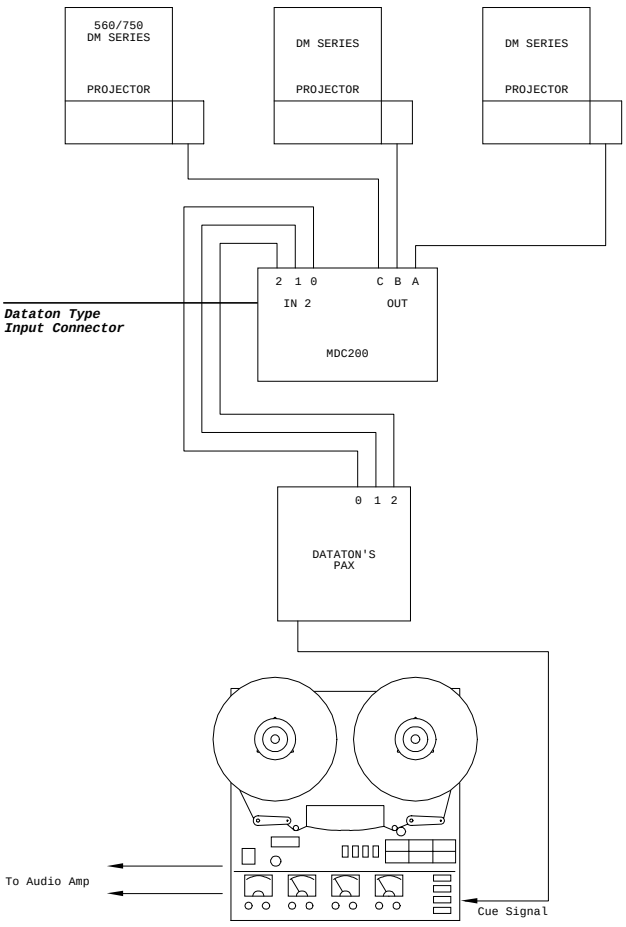
MDC200 has a connector (HOME Connector) to put out the zero (0) position signal of a slide tray. You can use this connector only when a dissolve controller other than PAX is used. If you have PAX, do not connect anything. This connector cannot be used. It may damage the PAX or other equipment connected to it. If you have a halogen slide projector, the output signal is off (OPEN) at the zero (0) position and on (CLOSED) at any position other than zero (0). A connector that can be used is a DIN 8P with pins placed in concentric circles.

Pin numbers for connection:

1 & 2	A
3 & 4	B
5 & 6	C
7 & 8	NC (Non-connection)

Examples of Connections





1 Year Parts/
1 Year Labor

This product is warranted to be free from defect in material and workmanship for a period of one year from the date of invoice to the original purchaser.

If during the warranty period the product is found to be defective, it will be repaired or replaced at the facilities of Navitar. However, Navitar reserves the right to refund the purchase price if the replacement or repair is not commercially practical or timely. Parts not manufactured by Navitar carry only the warranty of their manufacturer. Lamps and fuses carry no warranty.

This warranty does not cover damage caused in transit; damage caused by misuse, neglect or carelessness; or damage resulting from either improper servicing or modification by someone other than Navitar. Further, this warranty does not cover any routine maintenance work that is reasonably expected to be performed by the purchaser.

No responsibility is assumed for unsatisfactory operating performance due to environmental conditions such as humidity, dust, corrosive chemicals, deposition of oil or other foreign matter, spillage or other conditions beyond the control of Navitar.

For service, repair or return procedures under this warranty, contact your distributor, your local Navitar field officer or Navitar direct at 716-359-4000 or 1-800-828-6778 in the United States.

Except as stated herein, Navitar makes no other warranties, expressed or implied by law, whether of merchantability, fitness for a particular purpose or otherwise. Further, Navitar shall not, under any circumstances, be liable for incidental, consequential or other damages.

Warning Δ

Xenon Lamp Contains Gas Under Pressure.
Read Instructions Carefully Prior to Operating or Moving.

The Xenon bulb contains pressurized gas.

Protective clothing and safety glasses should be worn at all times.

Avoid direct exposure or viewing of an energized bulb in order to prevent ultraviolet damage.

Allow bulb to fully cool before handling. Handle bulb only by the ends.

To clean a bulb, use ***only*** rubbing alcohol, ***only*** when the bulb is fully cooled.

When disposing of the bulb, handle it with care to prevent injury.

If you have any questions, please call Navitar at 1-800-828-6778.

NAVITAR®

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